



Anthrax

What is Anthrax?

Anthrax is a naturally occurring disease affecting deer, livestock, exotic livestock, horses, swine, dogs and humans. It is caused by *Bacillus anthracis*; a spore-forming bacteria. The bacteria can remain alive, but dormant in the soil for several years.

How an Outbreak Occurs

The bacteria can surface, contaminating soil and grass after periods of wet, cool weather, followed by hot, dry conditions. During these conditions, animals ingest the anthrax bacteria when they consume contaminated grass and hay, or by inhaling the spores. The spores are odorless, colorless and tasteless. Outbreaks will usually end when cooler weather arrives. The bacteria will then become dormant.

Anthrax is found worldwide, but in Texas, cases are most often confined to a triangular area bound by the towns of Uvalde, Ozona and Eagle Pass. This area includes portions of Crockett, Val Verde, Sutton, Edwards, Kinney and Maverick Counties.

Signs and Symptoms

After exposure, it usually takes three to seven days for animals to show symptoms of anthrax. Once symptoms begin, death will usually occur within 48 hours. Acute fever followed by rapid death with bleeding from body openings are all common signs of anthrax in livestock. Carcasses may also appear bloated and appear to decompose quickly.

Symptoms may include the following:

- Acute fever
- Staggering
- Depression
- Difficulty breathing
- Seizures
- Dark blood oozing from mouth, nose, and anus
- Sudden death

Infection is usually less severe in swine, horses, dogs and humans. Although they may become ill, they can fully recover.

Diagnosis

Anthrax is a reportable disease in Texas. The Texas Animal Health Commission (TAHC) should be notified of all suspected and confirmed cases of anthrax. Reports can be made to any TAHC region office or to the TAHC headquarters at 1-800-550-8242.

When an anthrax outbreak begins, veterinarians will have the initial cases confirmed through laboratory tests conducted at the Texas Veterinary Medical Diagnostic Laboratory (TVMDL), in College Station or Amarillo. Subsequent cases in an outbreak are to be expected and may be diagnosed clinically, based on signs of disease and sudden death loss.

Vaccination

An effective anthrax vaccine is available.

Vaccination should be done two to four weeks prior to the normal outbreak season, usually in early spring. Because this is a live vaccine, antibiotics should not be given within one week of vaccination.

Consult a local veterinarian or a local TAHC region office for more details on vaccinating your livestock for anthrax. All label directions should be followed carefully, including measures to protect personnel who handle the vaccine from accidental exposure.

The vaccine is recommended for:

- Livestock residing in or near an outbreak
- Animals that will be moved into the area, such as horses transported to trail rides

White-tailed deer are often hard-hit by the disease. There is no approved vaccine for use in deer.

TAHC Regulations

Upon laboratory confirmation of the disease, the TAHC will work closely with the affected landowner to stop movement of animals and implement control measures on the property. This includes vaccination of any remaining animals, proper disposal of all carcasses and infected materials and monitoring live animals for any

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signs of illness until vaccines have time to take effect. Animals will be allowed to move off the property again only when it is deemed safe to do so.

Carcass Disposal and Disinfection

TAHC regulations require that the owners and/or caretakers burn each carcass until they are thoroughly consumed to prevent further contamination of the soil with the organism. Burning carcasses is the only method to ensure that the anthrax bacteria will be killed.

Due to environmental concerns, heavy oils or tires to burn carcasses should not be used! Fuels permitted by the Texas Commission on Environmental Quality (TCEQ) include gasoline, diesel or wood.

Care should be taken to keep fires from burning out of control. In counties under a burn ban, burning **MUST** be coordinated with local fire authorities prior to carcass disposal.

If the animal was housed in a barn, the carcass, bedding, manure, other contaminated material and surrounding soil should be promptly removed and burned. Consult your veterinarian for appropriate methods to decontaminate the soil. To disinfect panels, trailers, milking facilities or equipment, use an ammonia-based disinfectant, peroxides, or chlorine dioxide labeled as effective for anthrax. All label directions should be carefully followed.

Safety Precautions

When dealing with vaccines and/or carcasses practice good biosecurity:

- Wear long sleeves and gloves
- Do not move or open bloated carcasses as that could release bacteria into the air
- Do not salvage hides, horns, antlers, skulls or any other tissue from the carcasses

Hands should be washed thoroughly! Consult your physician for treatment if you suffer a needle stick, splash vaccine in cuts or scratches, or if you develop a sore or lesions after handling vaccine, livestock or carcasses. Humans may contract a skin form of anthrax that requires specific antibiotic treatment.

Dogs should be kept out of pastures and away from carcasses during an anthrax outbreak. They may develop an infection from the bacteria and may require treatment.

Swimming in stock tanks or stagnant ponds where death losses have occurred is not safe and should not be done. Streams, however, are considered safer, as the moving water will dilute organisms. Animal carcasses located in streams or rivers should be promptly reported to the local sheriff or police departments.

During an outbreak, wild hogs shot in an affected area should not be consumed. Swine may have fed on carcasses and although swine are resistant to anthrax, they may temporarily harbor the bacteria.

Advice for Hunters

- Wear latex gloves when processing game, to prevent potential exposure to bacteria, viruses or parasites
- Thoroughly cooked meat is considered safe to eat

Information provided by the
Texas Animal Health Commission
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